by changing the excess-energy absorbing gases or the materials of the emitter and dislocating the position of the interference peaks on the mass axis.

Further in the IAMS of the present invention, the ions produced by the ion attachment to the object to be measured are metal ions. The typical materials of the metal ions are, for example, Li oxide, Si oxide and Al oxide. When heating these materials at about 600 °C, the metal ion (Li+) is emitted into the space. The emitter is applied with a predetermined bias voltage. This is for moving or transporting the generated ions. In addition, a repeller is disposed at the backside in order to prevent the produced ions from leaving to a distant place from the mass spectrometry. The IAMS of the present invention does not need a special applied voltage.

Additionally, Mitsui discloses a plasma ion source mass spectrometer. However, Mitsui does not disclose IAMS. That is, in the mass spectrometer of Mitsui, a sample to be detected is ionized in plasma, while in the IAMS of exemplary embodiments of the present invention, a sample to be detected is ionized by making the positively charged ions emitted by the ion emitter attached to the sample. In the case of IAMS, the energy relation between the sample and the positively charged ions attached to the sample is significant. Please refer to paragraphs [0004]-[0010] of the present specification which differs from the disclosure of Mitsui. A significant feature of the present invention is to reduce or prevent the occurrence of the interference peak. The problem of the occurrence of an interference is peculiar to IAMS.

On page 2 of the Office Action, the Examiner asserts that Mitsui discloses a mass spectrometer. Applicants respectfully disagree. Specifically, for example, as to claim 1, the mass spectrometry of Mitsui has no "step of performing the measurement by selecting one type of...," no "a step of judging whether interference peaks..." and no "a step of performing the measurement by selecting another type of...." These features are similarly recited in claims 2, 5 and 6.

Again, a significant feature of exemplary embodiments of the present invention is to change a type of the excess-energy absorbing gas (the third body gas) or a type (material) of the ion emitter and thereby shift the position of the interference ions from the position of the sample gas ions to be detected, to which metal ion is attached, on the mass number line. The position of the interference ions are separated from the position of the sample gas. As a result, the measurement without the interference can be performed.

On the other hand, Mitsui is characterized by performing the measurement without any effect of obstruction ions which is neutralized by the collision between the obstruction ions and the gas with ionized potential at the middle of the obstruction ions and the sample gas to be detected.

Sheehan does not make up for the deficiencies of Mitsui discussed above. As discussed above, Mitsui is substantially different from the claimed invention. Therefore, even if Mitsui is combined with the teachings of Sheehan, there is no clear showing that the resulting combination would correspond to the subject matter recited in claims. In fact, Applicants respectfully submit that only the present application suggests the claimed combination of features. As such, the asserted combination of Mitsui and Sheehan was made using improper hindsight reconstruction of the references. Accordingly, one of ordinary skill in the art would not arrive at the claimed invention for IAMS in view of the teachings of Mitsui and Sheehan. Accordingly, withdrawal of the rejection of the claims under 35 U.S.C. §102 and §103 is respectfully requested.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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JAO:KMM/jfb

Attachment:
Petition for Extension of Time

Date: July 19, 2005

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